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EXAMINER	
WEST, JEFFREY R	

ART UNIT	PAPER NUMBER
2857	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/955,796	SCHLOTZHAUER ET AL.	
	Examiner	Art Unit	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29 and 31-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 7-9, 14-29, 31-33, and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,907,557 to Perez et al. (incorporating by reference U.S. Patent No. 6,401,220 to Grey et al.) in view of U.S. Patent No. 6,449,741 to Organ et al.

MPEP §2163.07(b) [R-3]: Incorporation by Reference: Instead of repeating some information contained in another document, an application may attempt to incorporate the content of another document or part thereof by reference to the document in the text of the specification. The information incorporated is

as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed.

With respect to claim 1, Perez discloses a method for a user of a measurement process to cause a variation in the measurement process (Grey et al.; column 2, lines 55-60 and column 11, lines 36-40), the measurement process comprising a sequence of operations controlled by a computer program (Grey et al.; column 11, lines 41-56 and column 12, lines 6-15) containing a variation point at which a function call instruction is inserted by a designer of the computer program (Grey et al.; column 12, lines 41-53) to pass control to a user-defined variation function (Grey et al.; column 14, lines 52-65), said method comprising determining the variation to the measurement process (Grey et al.; column 13, lines 50-58), providing a user-generated process modification software module comprising the user-defined variation function for causing the variation (Grey et al.; column 12, lines 41-53 and column 14, lines 52-65), and associating the function call instruction with the user-defined variation function prior to execution of the measurement process (Grey et al.; column 13, lines 50-58 and column 14, line 52 to column 15, line 9), generating an executable variation of the measurement process (Grey et al.; column 2, lines 55-60, column 11, lines 36-40, and column 13, lines 50-58) wherein the function call instruction passes control to the user-defined variation function when the variation point in the computer program is reached (Grey et al.; column 13, lines 50-58 and column 14, line 52 to column 15, line 9).

Perez also discloses that the user is permitted to modify the measurement process by configuring parameters (Perez et al.; column 4, lines 49-63 and column

10, line 57 to column 11, line 14), such as the parameters used through the user-defined variation function (Grey et al.; column 14, lines 52-65), while preventing the user from modifying the measurement process through particular sequences (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14).

With respect to claims 2-4 and 31-33, Perez discloses that the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process with the interface operating at a binary protocol (Grey et al.; column 13, lines 7-15).

With respect to claims 7 and 36, Perez discloses that said interface is determined by the user and is identified and passed into said measurement process (Grey et al.; column 13, lines 7-30).

With respect to claims 8 and 37, Perez discloses that said process modification software module is one of a computer program conforming to a software component specification for distributed applications or dynamically linked library (i.e. C, C++, JAVA, Visual Basic) (Grey et al.; column 13, lines 53-57 and column 14, lines 66-67).

With respect to claim 9, Perez discloses that the measurement process and the process modification software module are executed in a shared computer memory space (i.e. the test executive software performs the measurement and the measurement modification) (Grey et al.; column 11, lines 41-56 and column 58, lines 60-67)

With respect to claims 14-18 and 24-28, Perez discloses that said variation comprises modification of data (Grey et al.; column 15, lines 11-14) received from the variation function including one or more numerical parameters (i.e. voltages) (Grey et al.; column 30, lines 49-52 and column 46, lines 30-35), selectable alternatives of control parameters (Grey et al.; column 19, lines 33-39), alteration of a configuration of the device under test (Grey et al.; column 18, lines 62-63), or causing input signals to be supplied to the device under test (Grey et al.; column 10, line 62 to column 11, line 6 and column 19, line 64 to column 20, line 5).

With respect to claim 21, Perez discloses a computer readable medium containing program instructions, generated by a program designer, for carrying out the associated method (Grey et al.; column 11, lines 41-56).

With respect to claims 22 and 23, Perez discloses passing measurement data to the function call (Grey et al.; column 14, lines 37-50).

With respect to claim 29, Perez discloses that the function call instruction invokes an interface (Grey et al.; column 12, lines 41-47).

With respect to claims 19, 20, and 38, Perez discloses a plurality of variation points that access the user for the reception of measurement data using a plurality of application programming interfaces wherein the measurement data is provided by a plurality of user-defined variation functions (i.e. the user-defined variation functions are applicable anywhere in the sequence as well as in multiple concurrently executed sequences) (Grey et al.; column 13, lines 16-25 and 32-44 and column 14, lines 52-65).

With respect to claim 39, since the function calls disclosed by Perez are in the instruction code, operable to control the measurement process at a variation point in the code, and allows corresponding user input to modify the measurement process, it is considered inherent that the designer of the instruction program has anticipated that the user may want to interact with or modify the measurement process because the designer of the code would have eliminated the possibility of user intervention and would not have provided user prompts if such interaction was not desired.

With respect to claim 40, Perez discloses a measurement system comprising a physical interface operable to supply signals to a device under test and receive signals from a device under test (Grey et al.; column 10, line 51 to column 11, line 34).

As noted above, the invention of Perez teaches many features of the claimed invention and while the invention of Perez does teach preventing the user from modifying the measurement process through particular sequences, Perez does not explicitly indicate that the program designer prevents the user from modifying the measurement process through the source code, thereby only allowing the user to modify the measurement process when desired (i.e. programmed) by the designer.

Organ teaches a single platform electronic tester comprising means for controlling testing of a DUT (column 4, lines 26-34) using a program executed by a user (column 4, lines 45-55) wherein the user is allowed to arrange the flow of test execution (column 4, lines 56-64) for performing measurements (column 6, lines 29-32) while the operator is allowed to selectively control modification of the test by

preventing the user from modifying the test/measurement process/program (column 13, lines 30-32 and column 14, lines 13-17).

It would have been obvious to one having ordinary skill in the art to modify the invention of Perez to explicitly indicate that the program designer prevents the user from modifying the measurement process through the source code, thereby only allowing the user to modify the measurement process when desired (i.e. programmed) by the designer, as taught by Organ, because Organ suggests that the combination would have improved the operation of Perez by allowing increased control by the designer to insure that only those authorized can edit the source code of the program (Organ; column 13, lines 30-32 and column 14, lines 13-17) and thereby reduce the chance of a user improperly editing the program, as is recognized as being a problem by Perez (Perez; column 10, line 57 to column 11, line 14).

4. Claims 5, 6, 10-13, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perez in view of Organ and further in view of U.S. Patent Application Publication No. 2002/0026514 to Ellis et al.

As noted above, the invention of Perez and Organ teaches many of the features of the claimed invention and while the invention of Perez and Organ does teach connecting the process-modifying host computer to a plurality of specific test instruments (Grey et al., Figure 1), the combination does not specifically indicate that the measurement and process modification be carried out using two separate

computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol.

Ellis teaches automated tool management in a multi-protocol environment comprising measuring/polling software located on a server computer system with corresponding processor and memory (0025) and user process control software (0007) located on a separate remote computer (0023), wherein the process control software and the monitoring/polling software communicate over a network using predetermined protocol including Common Object Request Broker Architecture and Simple Object Access Protocol (0007).

It would have been obvious to one having ordinary skill in the art to modify the invention of Perez and Organ to include specifying that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol, as taught by Ellis, because, as suggested by Ellis, the combination would have provided improved analysis and control by allowing input and diagnostics by a larger variety of users through remote access (0005 and 0008).

Response to Arguments

5. Applicant's arguments filed April 17, 2007, have been fully considered but they are not persuasive.

It is first noted that Applicant argues "Claims 1-10" in "Response to Rejections of Claims Under 35 U.S.C. § 102" and indicates "The Examiner cites Perez, which

incorporates Grey by reference, as anticipating claim 1" while the Office Action did/does not include any 35 U.S.C. 102 rejection.

The Examiner also notes that the listing of claim 1 presented on page 12 of the arguments filed April 17, 2007, does not include the newly added limitation of "generating an executable variation of the measurement process".

Applicant argues:

> Perez and Grey disclose a software tool, the "TestStand", that allows a user to design and edit test sequences. The user is not prevented from modifying a test sequence created using the tool. This type of system is described on page 2, line, 16, to page 3, line 9, of the specification for the present invention. In particular, Perez and Grey describe systems in which the user is free to create a test procedure through definition of the sequence of steps, whereas Applicant's Claim 1 provides for a user to modify a process without allowing the user to modify the original computer program. The process itself is determined by the designer of the computer program. Using variation points, the user may make variations to the process without the risk of invalidating the process itself or even of disclosing the source code of the process to disclose proprietary information. In contrast, Perez and Grey provide no constraints to prevent a user from defining an invalid process. Thus, Perez and Grey do not teach or suggest "wherein the user is prevented from modifying the measurement process other than through the user-defined variation function" as recited in Applicant's Claim 1.

The Examiner asserts that the Office Action does not rely upon Perez for teaching such a feature but rather specifies that "while the invention of Perez does teach preventing the user from modifying the measurement process through particular sequences, Perez does not explicitly indicate that the program designer prevents the user from modifying the measurement process through the source

code, thereby only allowing the user to modify the measurement process when desired (i.e. programmed) by the designer."

Applicant argues:

Organ teaches a single platform electronic tester with a graphical user interface that allows a user to arrange the flow of test program execution that' contains digital, analog, and memory test components. (Organ, col. 4, lines 56~ 59, col. 13, lines 19-40, and FIG. 7). The graphical user interface includes a mode button 202 to set whether the graphical user interface is operating in the production mode or the engineer mode. In the engineer mode, the user can modify the test sequence; in the production mode the operator cannot modify the test sequence. The user interface is displayed in Organ, FIG. 8 as operator tool 160. The operator tool 160 allows protection to prevent unauthorized access to the tools that allow modification of a test program.

Organ does not teach or suggest the limitation "wherein the user is prevented from modifying the measurement process other than through the user- defined variation function" of Claim 1 which is missing from the Perez and Grey references. In Organ, the operator tool 160 operates in either the engineer mode, which allows modification to the test sequence, or in the production mode, which does not allow modification to the test sequence. In the engineer mode, the user is free to modify the test sequence at will. However, once the test sequence (or measurement process) is placed into the production mode, no changes are allowed to the test sequence. At any given time, the operator tool 160 can operate only in one or the other mode. Thus, Organ does not teach simultaneous allowing modification of the measurement process through a user-defined variation function and preventing modifying the measurement process other than through the user-defined variation function. Thus, even if Organ were operating in the production mode, which prevents modification of the arranged test flow execution of the measurement process, Organ could not be combined with Perez and Grey to prevent modification of the arranged test flow execution of the measurement process in Perez and Grey, because it would make the TestStand Engine 220 of Perez and Grey inoperable for its intended purpose, namely, "creating, editing, executing, and debugging sequences" (Grey, col. 13, lines 32-33).

The Examiner disagrees with Applicant's interpretation that in Organ modification is not permitted in the production mode. The Examiner asserts that Organ discloses allowing the test engineer to modify the test:

> The enVision++ executive system 130 allows the test engineer to write additions 189 to test methods 187. The user additions are written in the C++ language. The test engineer is typically given the source code and can make variations to the source code. Test engineers can also write their own code and create their own objects, although for one embodiment new object types cannot be created by a test engineer. For an alternative embodiment, new object types can be created by a test engineer. (column 12, lines 27-35)

while in engineering mode, but also provides, in addition to the engineering mode, a production mode:

> Menu box 200 shows which software release of enVision++ is being launched by network interface computer 14. The user can click with mouse 49 on user mode buttons 202 to indicate whether the enVision++ is in the production mode or the engineer mode. The user can indicate that a simulator mode is being used by using menu box 204. Buttons 206 allow the user to indicate which test head of electronic tester 10 is being used for the embodiment of tester 10 with two test heads. By typing on line 208, the user can indicate an operator tool option. The cancel button 210 allows the user to cancel the current use of launcher 134, which results in the display of graphical user interface 134 being closed. (column 13, lines 28-40)

wherein during the production mode a production operator is still allowed to modify the test by controlling operator variables:

> The user can select button 242 for specifying operator variables. The operator variables are the variables that the production operator of electronic tester 10 can control. The test temperature is an example of an operator variable. (column 14, lines 19-21)

Organ further discloses that the operator is allowed to selectively control modification of the test by preventing the user from modifying the test/measurement process/program:

> The user can click with mouse 49 on user mode buttons 202 to indicate whether the enVision++ is in the production mode or the engineer mode. (column 13, lines 30-32)
>
> Operator tool 160 allows protection to prevent unauthorized access to the tools that allow modification of a test program. Controls 234 allow the turning off and on of the break, trace, and override features. When the break button is turned on, the testing stops at break points. (column 14, lines 13-17).

The Examiner, therefore, asserts that "allowing modification of the measurement process through a user-defined variation function and preventing modifying the measurement process other than through the user-defined variation function" is not taught by either the Perez or Organ reference individually, but rather is met by the combination of references, specifically with Perez disclosing the modification of a measurement process by a user and Organ teaching allowing the user to modify the measurement process when desired (i.e. programmed) by the designer while still preventing the user from modifying the measurement process otherwise.

The Examiner further disagrees that the combination of Organ with Perez would "make the TestStand Engine 220 of Perez and Grey inoperable for its intended purpose, namely, 'creating, editing, executing, and debugging sequences'" as the

combination would only prevent the modification (i.e. creating, editing, executing, and debugging) when undesired but would still allow the modification when desired. Further, the invention of Perez lends to the combination as Perez does suggest the desirability of reducing the chance of a user improperly editing the program, specifically:

> The functionality described above may be implemented in any of various ways in various embodiments. In one embodiment, it may be useful or necessary to maintain an association between the base test sequence and each child test sequence. In one embodiment, the association between the base test sequence and each child test sequence may be "locked", wherein the locking prevents the user from editing the child test sequence in certain ways. For example, in various implementations it may be necessary to prevent the user from editing a child test sequence in certain ways, so that the child test sequence is structured in a well-known way or is in a known state and can thus be automatically updated in response to changes made to the base test sequence as described above. As an example, in one embodiment the user may be allowed to change a parameter configuration for a step in a child test sequence, but may not be allowed to add a new step to the child test sequence without breaking the association between the base test sequence and the child test sequence. If necessary, the user may override the allowed editing policies in order to configure a certain child test sequence as desired. However, doing so may cause the association between the base test sequence and the child test sequence to be broken or removed, such that the child test sequence can no longer be automatically updated. (Perez; column 10, line 57 to column 11, line 14).

Applicant then argues:

> Since Organ in combination with Perez and Grey would render Perez and Grey inoperable for its intended purpose, per Tec Air, supra, Winner International Royalty Corp., supra, and/n re Gurley, supra, Organ actually teaches away from the Examiner's proposed combination. Thus, Perez, Grey, and Organ cannot even be combined to formulate an obvious-type rejection under 35 U.S.C. § 103. Ellis does nothing to overcome the deficiencies of Perez, Grey, and Organ in meeting the limitation "wherein the user is prevented from modifying the measurement process other than through the user-defined variation function" missing from Perez, Grey, and Organ. Accordingly, Applicant respectfully

submits that the 35 U.S.C. § 103 rejection of Claim 1 should be withdrawn and that Claim 1 is now in position for allowance.

As noted above, the Examiner asserts that the combination of Perez and Organ would not render Perez inoperable for its intended purpose nor teach away from the combination as the combination would only prevent the process modification when undesired but would still allow the modification when desired and, further, the invention of Perez lends to the combination as Perez does suggest the desirability of reducing the chance of a user improperly editing the program

Therefore, the Examiner maintains that it would have been obvious to one having ordinary skill in the art to modify the invention of Perez to explicitly indicate that the program designer prevents the user from modifying the measurement process through the source code, thereby only allowing the user to modify the measurement process when desired (i.e. programmed) by the designer, as taught by Organ, because Organ suggests that the combination would have improved the operation of Perez by allowing increased control by the designer to insure that only those authorized can edit the source code of the program (Organ; column 13, lines 30-32 and column 14, lines 13-17) and thereby reduce the chance of a user improperly editing the program, as is recognized as being a problem by Perez (Perez; column 10, line 57 to column 11, line 14).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to

Applicant's disclosure.

U.S. Patent No. 6,308,326 to Murphy et al. teaches run-time modules for dynamically adjusting computer operation.

U.S. Patent No. 6,769,114 to Leung teaches methods and apparatus for preventing software modification from invalidating previously passed integration tests.

U.S. Patent Application Publication No. 2003/0046665 to Ilin teaches a reusable software component for textually supplementing, modifying, evaluating, and processing procedural logic for a compiled host program at run-time.

U.S. Patent No. 6,766,514 to Moore teaches a compiler having real-time tuning, I/O scaling and process test capability.

U.S. Patent No. 6,351,843 to Berkley et al. teaches dynamically inserting a function into an application executable at runtime.

U.S. Patent No. 6,202,043 to Devoino et al. teaches a computer based system for imaging and analyzing a process system and indicating values of specific design changes.

U.S. Patent No. 6,163,879 to Mackey teaches an interface and method for facilitating writing and modifying of lines of programming code.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey R. West
Primary Examiner
Art Unit – 2857

July 20, 2007